City of Mission Viejo
IT Strategic Plan
Midpoint Review

Prepared by Civic Resource Group

Submitted to the City of Mission Viejo

February 2016

The City of
MISSION VIEJO
IT STRATEGIC
PLAN REVIEW

2016

Table of Contents

Introduction & Overview

This document provides a review and update of the current Mission Viejo Information Technology (IT) Strategic Plan, which was created in 2006 and updated in 2012. Following is a background and gap analysis of current city projects, a best practices review, recommendations of current shared services pilots, and final recommendations for future projects to best maximize efficiency, citizen engagement and transparency throughout Mission Viejo city government.

Despite the rapid pace of technological progress and the budget confines of any city, Mission Viejo continues to be a standard-bearer of municipal technology in Southern California. Compared to other cities of its size, Mission Viejo leads the way in advanced IT initiatives such as internal business applications and effective e-government services for citizens. City officials and staff have a history of incorporating new technologies into existing city infrastructure, resulting in streamlined cost efficiencies, and increased productivity, transparency and community development.

Looking forward, Mission Viejo should continue to prioritize technological infrastructure investments to maintain the high quality of constituent services that residents expect. Residents of Mission Viejo are forward-thinking and savvy with their technological devices; their local government should reflect this commitment to "touch-free" and user-friendly services.

Balancing the rapid pace of technological development with existing current IT infrastructure is challenging for any city. Mission Viejo does an impressive job adjusting to the rapid pace of technological progress, but the City's IT infrastructure, resources, and service delivery technologies face considerable pressure to meet the current and future needs of residents. All recommendations in this report derive from ongoing conversations between Dr. Greg Curtin, CEO and Founder of Civic Resource Group, and Mission Viejo Councilmembers and executive staff, as well as analysis of current IT projects and software systems.

The City of Mission Viejo prioritizes improvements on their most commonly used city services. This emphasis on "basics" transcends into technology as well—thus, all recommendations emphasize the need to strengthen the most relevant and useful city services before adopting new policies.

Even with its success, Mission Viejo needs to prepare so that future generations of residents enjoy today's high quality of life.

The City has admirably created a considerable budget surplus in recent years. Since most citizens interact first with their elected officials through the internet, web portal or City App, technological infrastructure is a prudent and effective way to invest in the future of the city. CRG believes now is the perfect time for Mission Viejo to strengthen their existing technological infrastructure and invest in other projects that will reap reward for generations to come.

1.0 Background Assessment/Gap Analysis

1.1 Digital City Checklist: Conversation Trends with City Officials

As discussed by Dr. Curtin in meetings with City Councilmembers, Mission Viejo is perfectly poised to become a 21st century "Digital, Smart City." Looking forward, constituents increasingly expect a high level of access and transparency with their elected officials that only technology can provide. "Digital Cities" can be identified with the following checklist:

1. **Publically Available Data.** As a new channel of information delivery, open data portals offer enormous potential for developing applications and increasing government efficiency. Publically available data is considered one of the core drivers of public engagement and improved governance performance, and leads to increased local innovation and entrepreneurship from tech-focused citizens, particularly youth.

2. **Mobile Technology.** Smartphones and mobile applications build a platform for information sharing and help connect municipal leaders with citizens. Most importantly, data produced on smart phone applications such as "Waze" and "Nextbus" reveal how cities operate at the most granular of levels.

3. **Cloud-based and Shared Services.** Cloud-based services, in which information is saved to a remote server, and shared services, where a number of agencies and departments share access to resources owned and managed by a host agency, provide cost-saving opportunities to deliver faster to citizens and create a level of digital sophistication that cities may struggle to provide on their own. Some cities also use cloud services to maximize the speed and accuracy with which they can collect data.

4. **Public WiFi Service.** Free or low-cost WiFi can greatly improve citizens' quality of life. For example, cities can use WiFi login information to determine pedestrian traffic flows, as the City of Boston does with its internet-enabled charging benches which also measure noise and air pollution. Public WiFi is also identified as the best way to decrease the "digital divide" between high and low-income residents.

1.2   Analysis of 2012 Recommendations: What Progress has Mission Viejo made?

Just in the last year, the Mission Viejo IT department has administered over 400,000 unique visitors to the City website, cultivated an increase in web traffic over 2014, and served as not only an important resource for city residents, but also attracted residents across all of South Orange County.

The 2014 Annual Report for the City also identified 263,380 annual Mission Viejo Blog views, 120,560 annual WiFi network users, and an impressive 2,075,752 of documents made available online. The City continues to work with other local municipalities to provide shared services to recover costs and facilitate efficiency. Costa Mesa, Aliso Viejo and Tustin benefit the most from these relationships. Overall, the City excels in technology management. Below is the list of suggestions from the 2012 IT Strategic Plan Update, including a status check on progress made.

Priority Initiative	Progress since 2012
1.1 Update IT Strategic Plan	• Completed • Included analysis and interviews with City Council and key staff • Recommended for continued updates as technology infrastructure advances
1.2 Reorganize IT Department	• Completed • No further re-organization recommended based on interviews and analysis
1.3 Implement Citywide IT Governance	• Ongoing • The City has developed IT governance process in alignment with City' overall operating procedures and work environment.
2.1 Prepare for Cloud Computing	• In Progress, under Re-evaluation • Recommend to selectively incorporate cloud solutions as part of City approved applications. Evaluation criteria is based on lowering the City of Mission Viejo's

Priority Initiative	Progress since 2012
	overall total cost of ownership (TCO). See appendix for list of City cloud applications.
2.2 Develop Master Data Framework	• Mission Viejo should proactively respond to meet Senate Bill #272 legislation requiring local agencies to meet the Public Records Act inventory of systems. • City is in process of compiling systems inventory.
2.3 Continue Disaster Recovery Planning	• Completed initial round • Recommended to continue as part of any future upgrades
3.1 Financial Management System Replacement/New ERP	• Completed under budget • Recommended as viable foundation for expansion into "no-touch" city permits
3.2 Desktop Productivity/PC Refresh	• Part of recurring operations. City is extending desktops currently 4 years old with no new plans for a hardware refresh. • City to migrate to latest Microsoft Operating System Windows 10; City to evaluate potential migration to Office 365 as part of operating system upgrade.
3.3 IT Security—Web, Mobile, Digital	• In progress and part of recurring operational procedures • Recently completed an outside security audit as part of the plan and is acting on recommendations. No major red flags/areas that were deemed unsatisfactory for the four rating areas evaluated as part of the assessment: • External Network • Internal Network • Wireless Network • Compromise Assessment
3.4 Pilot Shared Services Program	• Selective opportunities realized, but no major initiatives • The City will continue to implement shared services where it is found most beneficial and cost-effective for residents of Mission Viejo
4.1 Social Media & Digital Communications	• Completed; Ongoing staff work currently supported by IT and Director of Communications. • Recommend formalizing City policies and procedures for Social media and clarifying responsibilities by department.
4.2 Open Data Initiative	• Recommended for the City to research and evaluate open data systems. • City has evaluated several vendor systems and continues to observe developments in this area. Vendors have not been able to demonstrate how this may benefit

Priority Initiative	Progress since 2012
	constituents. All data is currently being presented on the City's website and this appears to be a duplicative effort to provide this data in another system or portal.

4.3 Expand Mobile Services/Solutions	• Completed with room for expansion
	• Recommended to increase marketing and communication to residents regarding functionality of Access MV 24/7 App
	   o Expand publicity in existing resident touchpoints (e.g. social media, current website)
	   o App-specific incentives often generate increased awareness (e.g. coupons to favorite local restaurants only available on the App)

4.4 Website Upgrades/ Standardization	• In Progress, emphasis on modern design and mobile readiness • New site will emphasize an enhanced constituent portal to improve access to online, "no-touch" service

2.0   Best Practices Review

Just in the three and half years since the previous IT Strategic Plan update, the public sector witnessed an explosion of data, intelligent devices and connectivity. Following are the key industry trends that define this new landscape.

➢ **Massive move to the Cloud**: Governments and the broader public sector are both adapting their information and networks on cloud platforms. The vast majority find these user-friendly, efficient, and secure. The "Cloud" refers to a convenient, on demand network with shared resources (e.g. networks, servers, storage, services, etc.). It can be executed with minimal management effort or service provider interaction, saving resources for limited city budgets.

➢ **Next Generation of Mobilization**: The public sector has witness a shift from standalone mobile applications to connected mobile experiences across multiple devices. Citizens increasingly expect to seamlessly navigate transitions between their desktops and smart phones. The new "normal" for city governments includes all mobile-responsive web applications.

➢ **Internet of Things (IoT) and Big Data**: The recent explosive growth of data impacts public infrastructure, devices, wearables, transport and countless other "things." Governments are wise to proactively engage with this data as an intimate look into citizen experiences. This information is particularly useful in "smart transportation" spaces to limiting traffic congestion,

and as a budget efficiency tool to identify and address redundant or outdated spending measures. Mission Viejo, for example, could replicate the success of Portland, Oregon, where city officials installed monitors to record emissions at popular traffic lights. The data gathered from these "smart" monitors enabled the city to claim federal credits for pollution reduction, which then sold for over $500,000 in the carbon offset market. Portland used these extra funds to pay for infrastructure and congested intersection improvements at no cost to residents.

➢ **Smart Cities/Connected Communities**: Digital technologies can now be used to enhance performance and wellbeing, to reduce costs on stressed public sector budgets, and to engage more efficiently and actively with citizens. Current examples of "smart city" projects are parking alleviation applications in San Diego (www.parkitdtsd.com), and smart water meters recently deployed in Mission Viejo.

➢ **Aging of Public Sector Employees**: Rapidly changing demographics of government and community leaders and decision makers require the use of smart technology to not only document tried and true practices, but to make them as efficient as possible for generations to come.

2.1 Vision and Goals for Information Technology at Mission Viejo

As identified in the previous IT Strategic Plan developed for Mission Viejo, there are four overarching themes that drive the City's technology vision:

1. **Citizen Services:** Animal services and Library assistance are the two most utilized city services in Mission Viejo. City officials should aim to continue to develop and enhance these systems to be as painless and "touch-free" as possible for residents to utilize.

2. **City Efficiency:** As a fiscally sound city with extremely responsible budget practices, Mission Viejo should prioritize technological investments that increase efficiency of budgets and resources. For example, the recent water savings realized in the city thanks to smarter water sensors could be replicated on a larger scale.

3. **Community and Economic Development:** Technology and related strategies such as Augmented Reality (AR) can be leveraged to support the City of Mission Viejo's position as a business-friendly city. Potential car buyers could be alerted via push notifications on their mobile device to visit one of the City's many car dealerships while driving on the 5 interstate.

4. **Secure City Assets and Risk Mitigation**: Technology infrastructure is not without risk. Particularly as Human Resources and Payroll information is automated, it is incumbent upon cities to provide all cyber security possible to protect employees and residents.

After consultation with City Council Members and key City staff, and the perspective of consultant's extensive work identifying technology needs in the public sector, the following principles have been identified for future technology projects in Mission Viejo:

- **Perfect the Basics** – Government technology must always be aligned with clear customer service and citizen engagement goals. While there is plenty of room for innovation, the most common public services should be prioritized.

- **Leverage Current Infrastructure Investments** – New applications and services should work to the greatest extent possible with the City's current network, server, and computer infrastructure, thus leveraging existing investments.

- **Constituent Focus** – The City's technology plan and decisions should be driven by resident, city employee, and local business needs; new technology should not be implemented unless there is an impact on any or all of these constituencies.

- **Maintain High Technology Standards** – Mission Viejo should be open to innovative technology solutions that meet requirements and needs, but should prioritize those that work within existing framework.

- **Realistic & Innovative Approach** – The City should realistically address their technology needs but also keep an eye on innovative, business-friendly and potentially "out of the box" solutions as well.

3.0   Pilot Shared Services Review and Lessons Learned

In an effort to control costs and leverage the City's IT infrastructure, the IT Strategic Plan included a pilot shared services program initiative. The City acted upon this recommendation to deliver certain types of IT related services to other area governments and agencies. This "shared services" model has been cited as an emerging innovative best practice whereby governments can work together collaboratively to acquire, develop and deliver services to each other and the public more effectively and with potential cost savings or even revenue generation.

The City responded to several RFP's with mixed results leading to the conclusion that the City should not actively pursue shared services opportunities in the near future. The benefits of shared services proved difficult to achieve given the administrative overhead associated with the government procurement process. The City should continue to be open to selective opportunities however, that leverage its infrastructure and that can be achieved with minimal administrative overhead.

4.0   Recommendations

To mirror the 2012 IT Strategic Plan Update, CRG organized our recommendations of current IT projects into four categories.

4.1   Organizational Preparedness Recommendations

The 2012 report highlighted numerous way to improve the City's Organizational Preparedness Recommendations, all of which have been successfully addressed. CRG noted in communication and interviews with City Council members that current elected leadership is extremely pleased with the implemented procedure. Thanks to the proactive work of the City IT Department, CRG offers no recommendations specific to this field.

4.2   IT Infrastructure Preparedness Recommendations

The City of Mission Viejo does a commendable job investing and prioritizing in critical infrastructure projects. Especially in times of budget surplus, these are important initiatives to invest in enthusiastically. Needs that are identified and met now will generate significant benefits in the future and maintain Mission Viejo's reputation as a municipality with future generations in mind.

Priority Initiative	Benefits/Value	Cost Factor
• **IT Infrastructure Preparedness Project Recommendations**		
1.1 Audio/Visual Project – Upgrades to Mission Viejo Television (MVTV) and the Council Chambers Includes: New Voting Systems, New Dais Screens, New HD Screens in Chamber	• Hardware updates critical to presentation of City as modern and responsive • High definition screens will add to technical sophistication of Council Chamber • Improve functionality of City Council Member experience • Improve reliability of failing systems	• Infrastructure Preparedness • Estimated Budget: $400,000 in FY2016 – 2017
1.2 Network Infrastructure Upgrade	• Replacing switches, routers and network systems will increase efficiency and prevent quality erosion • Upgrade virtual environment to VMWare 6	• Infrastructure Preparedness • Estimated Budget: $200,000 - $250,000 in FY 2017-2018
1.3 City Website Overhaul and Redesign	• Modern, mobile responsive website crucial for engagement with residents • Adoption of "no-touch" city services interactions depend on solid web infrastructure	• Infrastructure Preparedness • Estimated Budget: $90,000 in FY2016 – 2017
1.4 WiFi in Parks/Public Spaces	• Public WiFi is important to adopt for cities to become "digital" • Suggested Locations in MV: Gilleran Park, Dog Park, Marguerite Recreation Center	• Infrastructure Preparedness • Estimated Budget: $100,000 - $200,000 in FY2017 – 2018

1.5	Hardware Updates (laptops and desktops)	• New hardware will increase efficiency, timeliness and quality of work for city employees	• Infrastructure Preparedness • Estimated Budget: $400,000 in FY2016 – 2017
1.6	Mobile Device Management (MDM) Cloud Service	• MDM would streamline device connectivity to city networks • Increase efficiency and city employee effectiveness	• Infrastructure Preparedness • Estimated Budget: $50,000 – $75,000 in FY2016 – FY2017
1.7	Continue Fiber Network Upgrades	• Documentation of network will allow for more effective management and build out redundancies • Future technical investment will rely on this network; responsible investment will save the City money in the future	• Infrastructure Preparedness • Estimated Budget: Varies significantly dependent on scale

4.3 Business Improvement and Automation Recommendations

As a city with a thriving economy, we suggest Mission Viejo continue to prioritize technical infrastructure projects that alleviate barriers for the business community. This will ensure that both the city government and businesses of all sizes can operate effectively and efficiently within city limits.

Priority Initiative	Benefits/Value	Cost/Factor
• **Business Improvement and Automation Recommendations**		
1.8 New Payroll/Human Resources Web System	• Impressive transition to web portal (approximately half of municipalities fail in smooth adoption) • Results in increased efficiency and transparency for city employees and officials	• Business Improvement and Process Automation • Initial Budget Estimate: $1,285,000 (project completed under budget) • Could be foundation for expansion into "no-touch" city permits

1.9	Sire Document Management System, including Class or Active System replacement	• Improve city transparency by providing millions of documents online • Requires ongoing management of data	• Business Improvement and Process Automation
1.10	Self-Check Process for Library	• Implement a self-check-out for books and library materials to elevate the traffic from circulation and improve check-out time for patrons	• Business Improvement and Process Automation • Estimated Budget: $35,000 in FY 2016-2017 Budget
1.11	Automate City Permitting	• Implement "no-touch" city permitting system for high-volume, low-impact permits such as solar panel installation	• Business Improvement and Process Automation • Estimated Budget: $75,000 - $100,000 in FY 2017-2018 Budget

4.4 E-Services and Digital Communications

Mission Viejo is rightfully proud of both their local Arts community, and history as one of the preeminent cities in Southern California. Adopting certain e-services to highlight this history for residents and visitors can bring increased interested and investment into the City.

Priority Initiative		Benefits/Value	Cost/Factor
• **E-Services and Digital Communications Recommendations**			
1.12	Mobile Applications for Trails and Art	• Publicize City Trails and public art to attract more visitors and engage current residents • Exciting possible Augmented Reality (AR) opportunities	• E-Services and Digital Communication • Estimated Budget: $15,000 - $50,000 in FY 2017- 2018
1.13	Local History Digitization	• Digitize and Preserve local city history content housed at the library, share online for possible research	• E-Services and Digital Communication • Estimated Budget: $15,000 - $30,000

	• Exciting possible Augmented Reality (AR) solutions also available for this request	

5.0   Conclusion

Mission Viejo is an excellent example of a City with sound fiscal and technological foundation. This document outlines the impressive progress made since the update to the IT Strategic Plan in 2012. Though many projects have been completed or are successfully in process, there is always rooms to grow, especially in times of economic surplus.

Certain technological advancements such as "no-touch" city permits, publically available WiFi, and an upgraded city website, among others, should be prioritized in upcoming budget cycles so the City can maintain its high caliber of constituent service. While it is challenging for any city to balance the rapid pace of technological development with existing IT infrastructure, Mission Viejo has a commendable track record of success. The recommendations outlined in this report will build on this success, and ensure Mission Viejo remains a wonderful place to live, build businesses, and visit for years to come.

6.0   Appendices

6.1   Current Mission Viejo Technology Projects

IT OPEN PROJECTS
IT OPEN PROJECTS			
Item #	**Project**	**Priority**	**Requesting Department**
1	Tyler Munis Payroll/HR Implementation - Phase II HR-Payroll New system for payroll and HR - convert HR data from HR Vantage database, import payroll data from ADP, new time clock system, new employee self serve portal	1	Finance
2	Audio/Visual Project Upgrade MVTV aging infrastructure to a new studio allowing for HD and adding new functionality for broadcasting from remote location Upgrade Council chamber infrastructure to connect to new TV studio Replace voting system Replace dais screens Replace Chamber large screen with HD screen	1	City Clerk/MVTV
3	City Website(s) overhaul and redesign Decision on multiple website presence, redesign and brand a new site, new content management system, new policy for content management	1	All Departments
4	Evaluate and implement a Class System Replacement Evaluation of class and facility reservation system completed	1	RCS/LIB/FIN/IT
5	Increase Sierra Link Bandwidth Sierra recreation center doesn't have enough bandwidth for the network traffic and it needs to be upgraded	1	RCS
6	Video Surveillance Implementation for Library Research and implement a video surveillance system for the Library building and provide viewing access to a number of departments	1	Library
7	Upgrade City laptops and desktops to latest operating system and software versions Create a new system image for all city laptops and desktops to include Windows 10, Office 2016 and latest software available for all other applications.	1	Information Technology
8	Sire Document Management System Due to sale of Sire Technologies, implement a new document management system and covert millions of documents stored digitally to new system, provide online access.	1	Information Technology

9	MVTV Video storage Research and implement storage for video data growth requiring new storage space and policy to manage	1	City Clerk/MVTV
10	Gilleran Park create Wi-Fi zone for visitors and use Wi-Fi network to connect cameras for surveillance and live streaming	1	City Manager
11	Dog Park create Wi-Fi zone for visitors and use Wi-Fi network to connect cameras for surveillance and live streaming	1	City Manager
12	Building Entry Systems Research and replace building entry system with new card system to allow for more zones and better secure buildings (CH, Lib, NPM)	1	Public Services
13	Wi-Fi at Village Shopping Center Research and develop a plan to provide Internet access to shopping center tenants	1	City Manager
14	Wi-Fi Upgrade/Replace at Marguerite Center Replace Wi-Fi at Marguerite Tennis to allow for better Wi-Fi signal for phone users at courts and parking area. Cameras to be used for surveillance and live streaming of Tennis events.	1	RCS
15	Mobile Device Management Cloud Service implement MDM to allow for the management of mobile devices being connected to city's networks.	1	Information Technology
16	Ongoing Fiber Network Upgrades build redundancies, replace broken fiber/splices, document network	1	
17	Network Infrastructure Upgrade replace all switches, routers and network systems new storage upgrade virtual environment to VMWare 6	1	Information Technology
18	Update & develop I.T. Policies (Technology Use, Retention / eDiscovery, Social Media)	1	Information Technology
19	Digitize Oral Board Panel Hiring binders Implement iPads so hiring panels can view applicant files in a digitized format	2	Human Resources
20	Self-Check for Library Implement a self-checkout for books and library materials to elevate the traffic from circulation desk and improve checkout time for patrons	2	Library

21	Local History Digitization Digitize and preserve local city history content housed at the library in paper format and make it available online for research	2	Library
22	Research and implement enterprise wide data encryption to secure data from hackers	2	Information Technology
23	Develop Security policies and mitigation plans	2	Information Technology
24	Implement an electronic method of filing of 700 Forms	2	City Clerk
25	Evaluate for implementation a tennis Player/Tournament Scheduling Software	3	RCS
26	Digital Media System to replace FrameRate Research and Implement a system to display digital media including videos on all TV displays at city facilities	3	City Manager
27	Passport Reservation Software Evaluation Evaluate software to assist the Passport Office with taking reservations	3	Library
28	Communication Initiatives New Blog website with mobile functionality needed New Constant Contact eNewsletter development with integration for social media	3	Information Technology
29	Wi-Fi Implementation at Nadadores with the aquatics complex remodel, provide network infrastructure cabling offices and Wi-Fi to connect staff and visitors for IT services. Provide infrastructure for cameras and surveillance as well as audio visual needs	3	Public Services
30	Wi-Fi Implementation at YMCA provide network infrastructure cabling offices and Wi-Fi to connect staff and visitors for IT services. Provide infrastructure for cameras and surveillance as well as audio visual needs	3	Public Services
31	Establish Web Governance Policy- Examples: http://www.ncdhhs.gov/publicaffairs/websiteguidance.htm and lots of good info here: http://www.usa.gov/webcontent/governance/	3	Information Technology
32	Mobile App for Trails and Art	3	Information Technology
33	Electronic Bidding for Public Works projects and other citywide Projects	3	Public Works
34	Digital/Electronic Signatures for contracts, workflow to route contracts and storage	3	City Clerk

35	Develop Social Media Policy (Internal and External)	3	Information Technology
36	Enroll Library in CENIC fiber program connecting MV Library to other State research and academic libraries	3	Library
37	Update Website Privacy Policy	3	Information Technology
38	Redesign IT work area with Tangram Cubicles	3	Information Technology

6.2 Key Industry Trends